

IN THE DRAWINGS

Please replace the sheets containing Figures 3 and 5 with the attached Replacement Sheets. No new matter is added by the amendments, as the amendments merely add the element 21b to present Figure 3 as described at page 30, line 17 of the present specification and correct element “213” to element “215” in present Figure 5 (See page 28, line 14 of the present specification).

REMARKS

Claims 1-11 and 14-19 are pending herein. Claims 12-13 and 20-42 are withdrawn.

I. The amendments to the drawings.

Applicants respectfully note that present Figures 3 and 5 are amended as indicated in the attached Replacement sheets. No new matter is added by the amendments. The amendments merely add element 21b to present Figure 5 as described in the present specification at page 30, line 17, and correct element “213” to element “215” in present Figure 5 (See page 30, line 17 of the present specification).

II. The anticipation rejections of claims 1-2, 6-7, and 19 based on Fukuda (JP 56-005975A), as noted on page 2 of the Office Action.

The USPTO respectfully rejects claims 1-2, 6-7, and 19 under 35 U.S.C. §102(b) as being anticipated by Fukuda. Claim 1 is an independent claim.

A. Fukuda does not disclose that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

Claim 1 claims in relevant part:

“a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas,

wherein a thin film is formed by exposing a substrate to the activated gas and,

the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and **with at least a part of a surface other than the discharge surface which continues to the discharge surface.” (emphasis added)**

Regarding these limitations, it is respectfully not seen where Fukuda discloses the claimed structure quoted above.

For example, the USPTO respectfully argues on page 3 of the Office Action that Fukuda discloses that “the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface

other than the discharge surface which continues to the discharge surface.” However, it is respectfully asserted that the USPTO has made a technical error, because Fukuda does not disclose a protecting film transported in contact with at least one of a first discharge surface and a second discharge surface and with at least a part of a surface other than the discharge surfaces which continues to the discharge surface.

For example, the USPTO respectfully argues on page 3 of the Office Action that Fukuda teaches a film transporting mechanism 13 (i.e., belt-like member 13). However, as seen in Figure 1(a) of Fukuda, it is respectfully important to note that the belt like member of Fukuda does not come in contact with at least a part of a surface other than the discharge surface which continues to the discharge surface. Instead, Fukuda only teaches that belt-like member 13 is proximate to an electrode 10, and does not teach or suggest anything about contacting a surface that continues to a discharge surface.

Therefore, as explained above, Fukada does not disclose that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

In contrast, present Figures 1, 3, and 4 illustrate one possible embodiment of the claimed structure quoted above. For example, as seen in present Figure 3, the protecting film contacts surface 21b of the small electrode 21. The protecting film 27 then passes through the flow path B and contacts the discharge surface 21a. As seen in present Figure 3, surface 21b continues to discharge surface 21a. Therefore, the protecting film 27 is transported in contact with the second discharge surface 21a and with at least part of a surface 21b other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

The distinction noted above is important and non-trivial because it results in significant advantages over conventional structures. For example, as explained on page 3 of the present specification, the heat of a plasma discharge causes unsupported substrates to contract producing wrinkles and stretches thereon and thereby reducing the uniformity of the resulting film. Thus, when the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1, wrinkles and stretches of the protecting film are eliminated and a

high quality thin film can be formed (See page 6 of the present specification). Additionally, as shown on page 7 of the present specification, **the protective film prevents the discharge surface of the second electrode from being contaminated and protects the discharge surface, allowing thin films to be stably formed over a long period of time.**

Thus, it is respectfully asserted that Fukuda does not disclose the limitations of independent claim 1. Therefore, it is respectfully asserted that independent claim 1 is not anticipated by Fukuda.

B. The dependent claims.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2, 6-7 and 19 are also allowable.

III. The anticipation rejections of claims 1-3 and 19 based on Oishi (JP 2003229299A), as noted on page 4 of the Office Action.

The USPTO respectfully rejects claims 1-3 and 19 under 35 U.S.C. §102(a) as being anticipated by Oishi. Claim 1 is an independent claim.

A. Oishi does not disclose that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

Claim 1 claims in relevant part:

“a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas,

wherein a thin film is formed by exposing a substrate to the activated gas and,

the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface.” (emphasis added)

Regarding these limitations, it is respectfully not seen where Oishi discloses the claimed structure quoted above.

For example, the USPTO respectfully argues on page 5 of the Office Action that Oishi discloses that the “protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface.” However, it is respectfully asserted that **the USPTO has made a technical error, because Oishi does not disclose a protecting film transported in contact with at least one of a first discharge surface and a second discharge surface and with at least a part of a surface other than the discharge surfaces which continues to the discharge surface.**

For example, the USPTO respectfully argues on page 4 of the Office Action that Oishi teaches a film transporting mechanism 4 (i.e., coating 4). However, as seen in Figure 2 of Oishi, it is respectfully important to note that **the coating 4 of Oishi does not come in contact with at least a part of a surface other than the discharge surface which continues to the discharge surface.** Instead, Oishi only teaches that coating 4 is proximate to electrode 2, and does not teach or suggest anything about contacting a surface that continues to the discharge surface.

Therefore, as explained above, Oishi does not disclose that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and **with at least a part of a surface other than the discharge surface which continues to the discharge surface,** as claimed in claim 1.

In contrast, present Figures 1, 3, and 4 illustrate one possible embodiment of the claimed structure quoted above. For example, as seen in present Figure 3, **the protecting film contacts surface 21b of the small electrode 21.** The protecting film 27 then passes through the flow path B and contacts the discharge surface 21a. As seen in present Figure 3, **surface 21b continues to discharge surface 21a.** Therefore, the protecting film 27 is transported in contact with the second discharge surface 21a and with at least part of a surface 21b other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

The distinction noted above is important and non-trivial because it results in significant advantages over conventional structures. For example, as explained on page 3 of the present specification, the heat of a plasma discharge causes unsupported substrates to contract producing wrinkles and stretches thereon and thereby reducing the uniformity of the resulting film. Thus, when the protecting film is transported in contact with at least

one of the first discharge surface and the second discharge surface and with at least part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1, **wrinkles and stretches of the protecting film are eliminated and a high quality thin film can be formed** (See page 6 of the present specification).

Additionally, as shown on page 7 of the present specification, **the protective film prevents the discharge surface of the second electrode from being contaminated and protects the discharge surface, allowing thin films to be stably formed over a long period of time.**

Thus, it is respectfully asserted that Oishi does not disclose the limitations of independent claim 1. Therefore, it is respectfully asserted that independent claim 1 is not anticipated by Oishi.

B. The Oishi reference should be removed under 35 U.S.C. 102(a).

Applicants respectfully note that the Oishi reference does not qualify as prior art under 35 U.S.C. 102(a) because the latest claimed foreign priority date of the present application is July 24, 2003, which is before the publication date August 15, 2003, of the Oishi reference.

Thus, the rejection is traversed and independent claim 1 is respectfully asserted to be allowable.

C. The dependent claims.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2-3 and 19 are also allowable.

IV. The obviousness rejections of claims 1-3, 6-7, 10-11, 14, 16, and 19 based on Murakami (JP 2002-339075) in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A), as noted on page 6 of the Office Action.

The USPTO respectfully rejects claims 1-3, 6-7, 10-11, 14, 16, and 19 under 35 U.S.C. §103(a) as being obvious over Murakami in view of Fukuda or Oishi. Claim 1 is an independent claim.

A. The cited references do not teach or suggest that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

Claim 1 claims in relevant part:

“a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas,

wherein a thin film is formed by exposing a substrate to the activated gas and,

the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and **with at least a part of a surface other than the discharge surface which continues to the discharge surface.**” (emphasis added)

Regarding these limitations, it is respectfully not seen where Murakami teaches or suggests the claimed structure quoted above.

For example, the USPTO respectfully notes on page 7 of the Office Action that Murakami “fails to teach a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas.” The USPTO respectfully attempts to overcome these deficiencies in Murakami by arguing that Fukuda or Oishi teaches a thin film forming apparatus using a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas and prevent the thin film from pollution. However, as noted above in sections II and III, it is respectfully asserted that neither **Fukuda nor Oishi disclose that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface,** as claimed in claim 1.

Therefore, the cited references do not teach or suggest the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and **with at least a part of a surface other than the discharge surface which continues to the discharge surface,** as claimed in claim 1.

In contrast, present Figures 1, 3, and 4 illustrate one possible embodiment of the claimed structure quoted above. For example, as seen in present Figure 3, **the protecting**

film contacts surface 21b of the small electrode 21. The protecting film 27 then passes through the flow path B and contacts the discharge surface 21a. As seen in present Figure 3, surface 21b continues to discharge surface 21a. Therefore, the protecting film 27 is transported in contact with the second discharge surface 21a and with at least part of a surface 21b other than the discharge surface which continues to the discharge surface, as claimed in claim 1.

The distinction noted above is important and non-trivial because it results in significant advantages over conventional structures. For example, as explained on page 3 of the present specification, the heat of a plasma discharge causes unsupported substrates to contract producing wrinkles and stretches thereon and thereby reducing the uniformity of the resulting film. Thus, when the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least part of a surface other than the discharge surface which continues to the discharge surface, as claimed in claim 1, wrinkles and stretches of the protecting film are eliminated and a high quality thin film can be formed (See page 6 of the present specification).

Additionally, as shown on page 7 of the present specification, the protective film prevents the discharge surface of the second electrode from being contaminated and protects the discharge surface, allowing thin films to be stably formed over a long period of time.

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach or suggest the limitations of independent claim 1. Therefore, it is respectfully asserted that independent claim 1 is allowable over the cited references.

B. The dependent claims.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2-3, 6-7, 10-11, 14, 16 and 19 are also allowable.

V. The obviousness rejections of claims 4-5 based on Murakami (JP 2002-339075) in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A) in further view of Achtner (US 5,652,022), as noted on page 10 of the Office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Achtner does not overcome the deficiencies in the cited references as noted above in section IV regarding independent claim 1. Therefore, it is respectfully asserted that dependent claims 4-5 are also allowable.

VI. The obviousness rejections of claims 8-9 and 15 based on Murakami (JP 2002-339075) in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A) in further view of Nakamura (US 6,489,585), as noted on page 11 of the Office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Nakamura does not overcome the deficiencies in the cited references as noted above in section IV regarding independent claim 1. Therefore, it is respectfully asserted that dependent claims 8-9 and 15 are also allowable.

VII. The obviousness rejections of claim 17 based on Murakami (JP 2002-339075) in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A) in further view of Fukuda (US 6,759,100), as noted on page 12 of the Office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Fukuda does not overcome the deficiencies in the cited references as noted above in section IV regarding independent claim 1. Therefore, it is respectfully asserted that dependent claim 17 is also allowable.

VIII. The obviousness rejections of claim 18 based on Murakami (JP 2002-339075) in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A) in further view of Sagawa (JP 63-134677A), as noted on page 13 of the Office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Sagawa does not overcome the deficiencies in the cited references as noted above in section IV regarding independent claim 1. Therefore, it is respectfully asserted that dependent claim 18 is also allowable.

IX. The obviousness type double patenting rejections of claims 1-3, 17, and 19 based on US Patent No. 6,759,100 in view of Fukuda (US 6,759,100) or Oishi (JP 2003229299A), as noted on page 15 of the Office Action.

The USPTO respectfully rejects claims 1-3, 17, and 19 on the ground of nonstatutory obviousness-type double patenting based on claims 1-3, 14-16, and 29-31 US Patent No. 6,759,100 in view of Fukuda or Oishi. Claim 1 is an independent claim.

The USPTO respectfully argues on page 15 of the Office Action that US 6,759,100 fails to teach “a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas.” The USPTO respectfully attempts to overcome this deficiency by arguing that Fukuda or Oishi teaches a thin film forming apparatus using a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas and prevent the thin film from pollution.

However, as noted above in sections II and III, it is respectfully asserted that **Fukuda and Oishi do not teach or suggest that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface,** as claimed in claim 1.

Thus, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2-3, 17, and 19 are also allowable.

Additionally, since the present claims have not been patented, it is respectfully not possible that double patenting can be determined yet (i.e., there is no way to compare the claims of the present application to US 6,759,100 until the present claims are allowable). Thus, the Applicants respectfully request that the USPTO withdraw the obviousness double patenting rejections until the present claims are in final form and otherwise in condition for allowance.

X. The obviousness type double patenting rejections of claims 1-3, 17, and 19 based on US Patent No. 7,166,335 in view of Fukuda (JP 56-005975A) or Oishi (JP 2003229299A), as noted on page 17 of the Office Action.

The USPTO respectfully rejects claims 1-3, 17, and 19 on the ground of nonstatutory obviousness-type double patenting based on claims 1-3, 14-16, and 29-31 US Patent No. 6,759,100 in view of Fukuda or Oishi. Claim 1 is an independent claim.

The USPTO respectfully argues on page 17 of the Office Action that US 7,166,335 fails to teach “a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas.” The USPTO respectfully attempts to overcome this deficiency by arguing that Fukuda or Oishi teaches a thin film forming apparatus using a film transporting mechanism for transporting a protecting film for preventing at least one of the first electrode and the second electrode from being exposed to the activated gas and prevent the thin film from pollution.

However, as noted above in sections II and III, it is respectfully asserted that **Fukuda and Oishi do not teach or suggest that the protecting film is transported in contact with at least one of the first discharge surface and the second discharge surface and with at least a part of a surface other than the discharge surface which continues to the discharge surface,** as claimed in claim 1.

Thus, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2-3, 17, and 19 are also allowable.

Additionally, since the present claims have not been patented, it is respectfully not possible that double patenting can be determined yet (i.e., there is no way to compare the claims of the present application to US 6,759,100 until the present claims are allowable). Thus, the Applicants respectfully request that the USPTO withdraw the obviousness double patenting rejections until the present claims are in final form and otherwise in condition for allowance.

XI. Conclusion.

Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

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